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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,809	12/19/2000	Mohammad Faisal	ORCL.P0073	7301

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EXAMINER
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ART UNIT	PAPER NUMBER
2175	

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.		Applicant(s)	
Office Action Summary	09/742,809	●	FAISAL, MOHAMMAD	
	Examiner		**Art Unit**	
	Neveen Abel-Jalil		2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 February 2003_ .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-15_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   The amendment filed on February 11, 2003 has been received and entered.

Claims 1-15 are pending.

Corrections made to the abstract of the disclosure on page 74, have been

acknowledged and accepted.

REMARKS

2.   Applicant amendment filed 2/11/2003 appears to contain on page 16, a typo.

For example, numbered claim 7, actually should be claim number 6. Correction or

clarification is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by <u>Wical</u>

(U.S. Patent No. 5,953,718).

As to claim 1, <u>Wical</u> discloses a method for generating cross-references among

categories in a knowledge base (See column 16, lines 54-57), said method comprising the

steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme

identifies subject matter contained in a corresponding document (See figure 2, 300);

generating a theme strength for said themes, said theme strength reflects the

amount of subject matter contained in a document for a corresponding theme relative to

other themes in said document (See column 6, lines 35-67, and column 7, lines 1-37,

wherein "generating a theme strength for said themes" reads on "reassigns theme

strengths based on the contextual relationship among theme identified for the document",

and wherein "theme strength reflects the amount of subject matter contained in a

document" reads on " each theme has a corresponding theme strength is a relative

measure of the importance of the theme to the overall content of the document", also see

table 1, column 7, lines 15-26, shows "relative to other themes in said document" is

represented by "theme strength column" listing the document themes from the most

important to the least important themes);

generating a plurality of scores (See figure 2, 310), from said theme strengths

(See column 6, lines 35-67, and column 7, lines 1-37, wherein "generating a theme

strength for said themes" reads on "reassigns theme strengths based on the contextual

relationship among theme identified for the document"), to identify a relative theme pair

strength (See figure 2, 320, also see column 7, lines 15-25, Table 1, shows Theme

Strength, also see column 7, lines 28-37, wherein the theme measure is defined as the

relative measure of the importance of the theme to the overall content of the document in

comparison with another theme present) for at least one pair of said themes extracted

from said documents (See column 4, line 6, also see column 7, lines 58-67, wherein "for

at least one pair" reads on "based on the number of query terms...theme...relevant

themes in the corresponding document" indicating comparison between more than one

theme);

selecting theme pairs based on said scores (See column 7, lines 56-58);

selecting category pairs in said knowledge base (See column 4, line 46, and also see column 23, lines 46-48) by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base (See column 4, lines 65-66, also see column 22, lines 49-52); and

generating a cross reference in said knowledge base between categories of said category pairs (See column 16, lines 54-57), wherein said cross reference identifies an association between said category pairs (See column 4, lines 26-28) .

As to claim 2, <u>Wical</u> discloses the method as set forth in claim 1, wherein the step of generating a plurality of scores (See column 6, lines 32-33) comprises the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of entries, wherein each column represents one of said themes and each row represents one of said themes (See figure 3, wherein "column represents one of said themes" reads on "Documents contains theme", and figure 8); and

generating a score for at least a subset of said entries of said matrix (See column 6, lines 32-34), such that a score reflects a relative theme pair strength between two themes represented by said entry for said documents (See column 7, lines 15-25, Table 1, shows Theme Strength, also see column 7, lines 58-67, wherein "theme pair strength" reads on "total theme weight for the relevant themes in the corresponding document" indicating more than one theme is being compared).

As to claim 3, <u>Wical</u> discloses the method as set forth in claim 2, wherein

the step of generating a score (See column 6, lines 32-34) for at least a subset of

said entries of said matrix (See figure 3, wherein "column represents one of said themes"

reads on "Documents contains theme", and wherein "score" reads on cumulative No. of

"X"'s, also see figure 8) comprises the steps of:

calculating a plurality of products for an entry by multiplying theme strengths

(See column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two

themes represented by said entry (See column 11, lines 5-15, table 4, shows # of Query

Terms) for each document (See column 11, lines 5-15, table 4, shows Document100) that

includes said two themes represented by said entry; and

summing said products for an entry to generate said score (See column 11, lines

33-34, and column 11, lines, 5-15, table 4, shows Total Score).

As to claim 4, Wical discloses the method as set forth in claim 1, wherein the step

of selecting category pairs in said knowledge base (See column 22, lines 49-52)

comprises the steps of:

determining whether only one of said themes exist as a category in said

knowledge base (See column 7, lines 38-40, also see column 23, lines 46-48);

if so,

generating a new category in said knowledge base for said theme (See column 24,

lines 1-4);

generating a new cross-reference relationship between said new category and a

category for which one of said themes exist (See column 24, lines 4-6, wherein "category

...exist" reads on "pre-defined categories"); and generating a new score for said new

cross-reference relationship (See figure 5, 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9).

As to claim 5, <u>Wical</u> discloses the method as set forth in claim 1, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge base (See column 23, lines 46-48, also see column 7, lines 38-40); if so,

determining whether a cross reference relationship exists from said category pair (See column 17, lines 16-18, also see figure 6);

if not,

generating a new cross-reference relationship between said category pair (See column 17, lines 48-49, wherein "new cross-reference relationship" reads on "links is generated through processing documents");

generating a new score for said new cross-reference relationship (See figure 5, 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9); and if so, generating a new score for said existing cross-reference relationship (See column 8, lines 58-60, wherein "existing cross-reference" reads on "Common theme and the additional theme").

As to claim 6, <u>Wical</u> discloses a system comprising:

search and retrieval module (See figure 1, search and retrieval system 100) for receiving a user query (See figure 1, shows User Query Arrow) and for generating a

query response (See column 4, lines 2-4) including query feedback (See figure 1, shows

Query Processing 165);

a knowledge base (See Figure 1, 155), coupled to said search and retrieval module

(See figure 1, search and retrieval system 100), for storing relationships among

terminology for use as query feedback (See column 3, lines 40-43);

a knowledge base processing system (See Figure 1, Learning Processing 165),

coupled to said knowledge base (See Figure 1, Knowledge base 155) for processing a

plurality of documents and automatically extending said relationships among said

terminology in said knowledge base (See column 16, lines 54-56), said knowledge base

processing system for extracting, from said documents, a plurality of themes (See figure

2, 300), wherein a theme identifies subject matter contained in a corresponding document

(See column 4, lines 2-4), for generating a theme strength for said themes, said theme

strength reflects the amount of subject matter contained in a document for a

corresponding theme relative to other themes in said document (See column 6, lines 35-

67, and column 7, lines 1-37, wherein "generating a theme strength for said themes"

reads on "reassigns theme strengths based on the contextual relationship among theme

identified for the document", and wherein "theme strength reflects the amount of subject

matter contained in a document" reads on " each theme has a corresponding theme

strength is a relative measure of the importance of the theme to the overall content of the

document", also see table 1, column 7, lines 15-26, shows "relative to other themes in

said document" is represented by "theme strength column" listing the document themes

from the most important to the least important themes);

for generating a plurality of scores (See figure 2, 310), from said theme strengths

(See column 6, lines 35-67, and column 7, lines 1-37, wherein "generating a theme

strength for said themes" reads on "reassigns theme strengths based on the contextual

relationship among theme identified for the document"), to identify a relative theme pair

strength for at least one pair of said themes extracted from said documents (See column

4, line 6, also see column 7, lines 58-67, wherein "for at least one pair" reads on "based

on the number of query terms...theme...relevant themes in the corresponding document"

indicating comparison between more than one theme), for selecting theme pairs based on

said scores, for selecting category pairs in said knowledge base by mapping said themes

of said theme pairs selected to corresponding categories of said knowledge base (See

column 7, lines 38-40, also see column 22, lines 49-52), and for generating a cross

reference in said knowledge base between categories of said category pairs (See column

16, lines 54-57), wherein said cross reference identifies an association between said

category pairs (See column 17, lines 9-11).

As to claim 7, <u>Wical</u> discloses the system as set forth in claim 6, wherein the

knowledge base processing system (See figure 1, search and retrieval system 100) further

for generating a matrix comprising a plurality of columns and rows to form a plurality of

entries, wherein each column represents one of said themes and each row represents one

of said themes (See figure 3, wherein "column represents one of said themes" reads on

"Documents contains theme", and wherein "score" reads on cumulative No. of "X"'s,

also see figure 8) and for generating a score for at least a subset of said entries of said

matrix (See column 7, lines 15-25, Table 1, shows Theme Strength), such that a score

reflects a relative theme pair strength between two themes represented by said entry for

said documents (See column 7, lines 15-25, Table 1, shows Theme Strength, also see

column 7, lines 58-67, wherein "theme pair strength" reads on "total theme weight for the

relevant themes in the corresponding document" indicating more than one theme is being

compared).

As to claim 8, <u>Wical</u> discloses the system as set forth in claim 7, wherein the

knowledge base processing system (See figure 1, search and retrieval system 100) further

for calculating a plurality of products for an entry by multiplying theme strengths (See

column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two themes

represented by said entry (See column 11, lines 5-15, table 4, shows # of Query Terms)

for each document (See column 11, lines 5-15, table 4, shows Document100) that

includes said two themes represented by said entry, and for summing said products for an

entry to generate said score (See column 11, lines 33-34, and column 11, lines 5-15, table

4, shows Total Score).

As to claim 9, <u>Wical</u> discloses the system as set forth in claim 7, wherein the

knowledge base processing system (See figure 1, search and retrieval system 100) further

for determining whether only one of said themes exist as a category in said knowledge

base (See column 7, lines 38-40, also see column 23, lines 46-48), if so, for generating a

new category in said knowledge base for said theme (See column 24, lines 1-4), for

generating a new cross-reference relationship between said new category and a category

for which one of said themes exist (See column 24, lines 4-6, wherein "category ...exist"

reads on "pre-defined categories"), and for generating a new score for said new cross-reference relationship (See figure 5, List themes in order of strongest theme 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9).

As to claim 10, <u>Wical</u> discloses the system as set forth in claim 7, wherein the knowledge base processing system further for determining whether both of said themes exist as categories in said knowledge base (See column 23, lines 46-48); if so, for determining whether a cross reference relationship exists from said category pair (See column 17, lines 16-18, also see figure 6); if not, for generating a new cross-reference relationship between said category pair (See column 17, lines 48-49, wherein "new cross-reference relationship" reads on "links is generated through processing documents"), for generating a new score for said new cross-reference relationship (See figure 5, List themes in order of strongest theme 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9); and if so, for generating a new score for said existing cross-reference relationship (See column 8, lines 58-60, wherein "existing cross-reference" reads on "Common theme and the additional theme").

As to claim 11, <u>Wical</u> discloses a computer readable medium (See figure 11) comprising a plurality of instructions (See column 24, lines 14-15), which when executed, causes the computer to perform the steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme identifies subject matter contained in a corresponding document (See figure 2, 300);

generating a theme strength for said themes, said theme strength reflects the

amount of subject matter contained in a document for a corresponding theme relative to

other themes in said document (See column 6, lines 35-67, and column 7, lines 1-37,

wherein "generating a theme strength for said themes" reads on "reassigns theme

strengths based on the contextual relationship among theme identified for the document",

and wherein "theme strength reflects the amount of subject matter contained in a

document" reads on " each theme has a corresponding theme strength is a relative

measure of the importance of the theme to the overall content of the document", also see

table 1, column 7, lines 15-26, shows "relative to other themes in said document" is

represented by "theme strength column" listing the document themes from the most

important to the least important themes);

generating a plurality of scores (See figure 2, 310), from said theme strengths

(See column 6, lines 35-67, and column 7, lines 1-37, wherein "generating a theme

strength for said themes" reads on "reassigns theme strengths based on the contextual

relationship among theme identified for the document") to identify a relative theme pair

strength (See figure 2, 320, also see column 7, lines 15-25, Table 1, shows Theme

Strength, also see column 7, lines 28-37, wherein the theme measure is defined as the

relative measure of the importance of the theme to the overall content of the document in

comparison with another theme present) for at least one pair of said themes extracted

from said documents (See column 4, line 6, also see column 7, lines 58-67, wherein "for

at least one pair" reads on "based on the number of query terms…theme…relevant

themes in the corresponding document" indicating comparison between more than one

theme);

selecting theme pairs based on said scores (See column 7, lines 32-34);

selecting category pairs in said knowledge base (See column 4, line 46, and also see column 23, lines 46-48) by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base (See column 4, lines 65-66, also see column 22, lines 49-52); and

generating a cross reference in said knowledge base between categories of said category pairs (See column 16, lines 54-57), wherein said cross reference identifies an association between said category pairs (See column 4, lines 26-28).

As to claim 12, Wical discloses the computer readable medium (See figure 11) as set forth in claim 11, wherein the step of generating a plurality of scores (See column 6, lines 32-33) comprises the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of entries, wherein each column represents one of said themes and each row represents one of said themes (See figure 3, wherein "column represents one of said themes" reads on "Documents contains theme", and figure 8); and

generating a score for at least a subset of said entries of said matrix (See column 6, lines 32-34), such that a score reflects a relative theme pair strength between two themes represented by said entry for said documents (See column 7, lines 15-25, Table 1, shows Theme Strength, also see column 7, lines 58-67, wherein "theme pair strength" reads on "total theme weight for the relevant themes in the corresponding document" indicating more than one theme is being compared).

As to claim 13, <u>Wical</u> discloses the computer readable medium (See figure 11) as set forth in claim 12, wherein

the step of generating a score (See column 6, lines 32-34) for at least a subset of said entries of said matrix (See figure 3, wherein "column represents one of said themes" reads on "Documents contains theme", and wherein "score" reads on cumulative No. of "X"'s, also see figure 8) comprises the steps of:

calculating a plurality of products for an entry by multiplying theme strengths (See column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two themes represented by said entry (See column 11, lines 5-15, table 4, shows # of Query Terms) for each document (See column 11, Table 4, document100) that includes said two themes represented by said entry; and

summing said products for an entry to generate said score (See column 11, lines 33-34, and column 11, lines 5-15, table 4, shows Total Score).

As to claim 14, <u>Wical</u> discloses the computer readable medium (See figure 11) as set forth in claim 11, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether only one of said themes exist as a category in said knowledge base (See column 7, lines 38-40, also see column 23, lines 46-48);

if so,

generating a new category in said knowledge base for said theme (See column 24, lines 1-4);

generating a new cross-reference relationship between said new category and a

category for which one of said themes exist (See column 24, lines 4-6, wherein "category

...exist" reads on "pre-defined categories"); and

generating a new score for said new cross-reference relationship (See figure 5,

450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9).

As to claim 15, <u>Wical</u> discloses the computer readable medium (See figure 11) as

set forth in claim 11, wherein the step of selecting category pairs in said knowledge base

(See column 22, lines 49-52) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge

base (See column 23, lines 46-48, also see column 7, lines 38-40);

if so,

determining whether a cross reference relationship exists from said category pair

(See column 17, lines 16-18, also see figure 6);

if not,

generating a new cross-reference relationship between said category pair (See

column 17, lines 48-49, wherein "new cross-reference relationship" reads on "links is

generated through processing documents");

generating a new score for said new cross-reference relationship (See figure 5,

450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9); and

if so,

generating a new score for said existing cross-reference relationship (See column

8, lines 58-60, wherein "existing cross-reference" reads on "Common theme and the

additional theme").

Response to Arguments

5.   Applicant's arguments filed on February 11, 2003 have been fully considered but
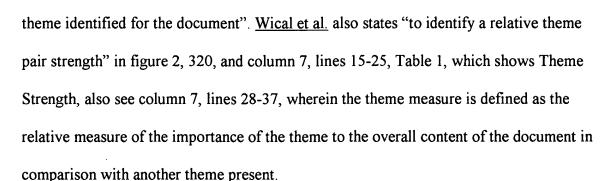
they are not persuasive.

Applicant's argument "The cited references do not disclose an automated Process

to generate cross-references between categories in a knowledge base".

Examiner's response is that the limitation is disclosed in Wical et al. see column

5, lines 19-34, wherein Wical et al. refers to the creation of associative categories within

the knowledge based either manually or learned from processing the documents

indicating a non-manual process thereby automated in nature internal to the system

processor. Also, see column 6, lines 4-31, wherein "automated process" reads on

"learning processing" indicating a new knowledge category creation based on previous

user selection and queries.

Applicant's argument "The cited references do not generate scores to identify

Theme pair strengths for pairs of themes".

Examiner's response is that the limitation is disclosed in Wical et al. column 6,

lines 35-67, and column 7, lines 1-37, wherein "generating a theme strength for said

themes" reads on "reassigns theme strengths based on the contextual relationship among

theme identified for the document". <u>Wical et al.</u> also states "to identify a relative theme

pair strength" in figure 2, 320, and column 7, lines 15-25, Table 1, which shows Theme

Strength, also see column 7, lines 28-37, wherein the theme measure is defined as the

relative measure of the importance of the theme to the overall content of the document in

comparison with another theme present.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the

extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the mailing date of this final action.

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

<u>Kleinberg et al.</u> discloses a system for extracting highly correlated elements from

a large database.

Liddy et al. (U.S. Patent No. 6,026,388) discloses scores that are indication of the strength of the association between the term and the document.

Rosenberg et al. (U.S. Patent 6,125,395) discloses finding pair strengths among document topics.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 703-305-8114. The examiner can normally be reached on 8:00AM-4: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Neveen Abel-Jalil
March 11, 2003

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